

PATENT

Case Docket No. WESTERN.016C2

Date: February 13, 2004



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) : Bloom et al.  
Appl. No. : 10/690,054  
Filed : October 21, 2003  
For : GRIPPER ASSEMBLY FOR  
DOWNHOLE TOOLS  
Examiner : Unknown  
Group Art Unit : 3672

I hereby certify that this correspondence and all marked attachments are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on

February 13, 2004

(Date)

*Sanjivpal S. Gill*

Sanjivpal S. Gill, Reg. No. 42,578

TRANSMITTAL LETTER

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Enclosed for filing in the above-identified application are:

- (X) A Supplemental Information Disclosure Statement.
- (X) The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment, to Account No. 11-1410.
- (X) Return prepaid postcard.

*Sanjivpal S. Gill*

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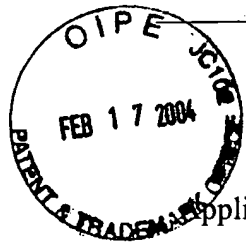
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**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Applicant	: Bloom et al.
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For	: GRIPPER ASSEMBLY FOR DOWNHOLE TOOLS
Examiner	: Unknown
Group Art Unit	: 3672

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This Supplemental Information Disclosure Statement is being filed with an RCE or within three months of the filing date of this application and no fee is required in accordance with 37 C.F.R. § 1.97(b)(1), (b)(2), or (b)(4).

For the purposes of examination, Applicants would like to bring to the Examiner's attention a gripper design for a downhole tool, which a third party disclosed to Applicants prior to Applicants' conception of the inventions claimed in the present application. The disclosed gripper design comprised multiple pairs of sliding wedges utilized to cause flexible toes of the gripper to flex radially outward to grip onto a borehole surface. In this design, one pair of sliding wedges was provided for each of the toes. The toes were oriented generally parallel to the tool body and located on the outer surface of the tool. Each pair of wedges included a first wedge and a second wedge. The first wedge was fixed onto a radially inner surface of the toe, approximately at the midpoint between the ends of the toe. The second wedge was located radially inward of the first wedge and was longitudinally movable with respect to the tool body. The wedges were oriented so that inclined surfaces (i.e., inclined with respect to the longitudinal axis of the tool) of the wedges confronted one another. As the second wedge moved toward the first wedge, the inclined surfaces of the wedges slid against one another, causing the first wedge

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and the central region of the toe to move radially outward. In this manner, the toes were flexed outward to grip onto the borehole surface.

This gripper design is the type that was disclosed on page 6, lines 4-17 of the application as filed, as follows:

“Some types of grippers have gripping elements that are actuated or retracted by causing different surfaces of the gripper assembly to slide against each other. Moving the gripper between its actuated and retracted positions involves substantial sliding friction between these sliding surfaces. The sliding friction is proportional to the normal forces between the sliding surfaces. A major disadvantage of these grippers is that the sliding friction can significantly impede their operation, especially if the normal forces between the sliding surfaces are large. The sliding friction may limit the extent of radial displacement of the gripping elements as well as the amount of radial gripping force that is applied to the inner surface of a borehole. Thus, it may be difficult to transmit larger loads to the passage, as may be required for certain operations, such as drilling. Another disadvantage of these grippers is that drilling fluid, drill cuttings, and other particles can get caught between and damage the sliding surfaces as they slide against one another. Also, such intermediate particles can add to the sliding friction and further impede actuation and retraction of the gripper.”

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 2/13/04

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